

The Yee et al. patent discloses a "satellite based broadcast data communications service for a satellite communications system is presented which allows a data information service provider (40) to send large blocks of data information to mobile subscriber units (50). A satellite gateway (30) is coupled to a service provider (40) via a ground link (42) and to a satellite communications network (10) via a gateway link (36). A mobile subscriber unit (50) is coupled to the satellite communications network (10) via both a message link (56) and a high-speed high-bandwidth downlink (58). The mobile subscriber unit sends a data request for requested data information to service provider (40) via message link (56), satellite communications network (10), gateway link (36), gateway (30), and ground link (42). Service provider (40) responds by retrieving and sending the requested data information to the requesting subscriber unit (50) via ground link (42), gateway (30), gateway link (36), satellite communications network (10), and high-speed high-bandwidth downlink (58). Service provider (40) sends a set of standard data information to the satellite communications network (10) to be broadcast over the high-speed high-bandwidth downlinks (58). Each subscriber unit 50 receives the broadcast standard data information, preferably only those portions for which the subscriber unit (50) has access authorization. The satellite based broadcast data communications service provides for data requests, data delivery, data access control, delivery priority, and billing for use of the system."

The Examiner's position is that the Yee et al. patent "discloses a data transmission system comprising: a two-way communication link (36, 56, & 58 all-together) comprising at least one satellite (10); at least one user terminal (subscriber 50) having two-way communication with the two-way communication link, and comprising a cache (i.e., the memory) for selectively caching data broadcast by way of the satellite of the two-way communication link (col.3 lines 33-36); and at least one gateway (30) having access to data and having two-way communication with the two-way link (Fig. 1, and col.3 lines 1-56).

It is respectfully submitted that the Examiner's characterization of the "memory" recited in the Yee et al. patent is an unsupportable extension of the teachings thereof in order to reject the present invention. The Yee et al. patent mentions the word "memory" in three places.

The Yee et al. patent states that "Subscriber unit 50 collects all data of potential interest to the subscriber, limited only by access authorization and memory limitations of the subscriber unit 50.", "Preferably, gateway control processor 32 includes a processor coupled to a memory and accompanying control hardware. Billing information, including the subscriber ID, for the delivery of data is extracted by gateway control processor 32 and sent to a billing function 34 as the data transmitted over gateway link 36.", and "Router controller 23 preferably includes a processor and a memory in which an address register containing locations of nodes in the communications network is maintained." Of these statements, only the first relates to the subscriber terminal.

The term "cache" is not used in the Yee et al. patent, and there is no disclosure or suggestion in the Yee et al. patent that the memory used in the subscriber unit is cache memory. As is well-known in the art, a "cache" or "cache memory" is not just any memory, but is specialized memory comprising a high-speed storage mechanism. The cache memory may be either a reserved section of main memory or an independent high-speed storage device. A cache memory is a portion of memory made of high-speed static RAM (SRAM) instead of the slower and cheaper dynamic RAM (DRAM) used for main memory. It is respectfully submitted that there is absolutely no disclosure or suggestion in the Yee et al. patent that any memory in the subscriber unit is specialized cache memory. The express statement regarding the subscriber unit memory is only that the "Subscriber unit 50 collects all data of potential interest to the subscriber, limited only by access authorization and memory limitations of the subscriber unit 50." This is clearly not a disclosure or suggestion that the subscriber unit contains cache memory.

Claims 1 and 11 both recite that the at least one user terminal comprises a cache for selectively caching data broadcast by way of the two-way communication link. It is respectfully submitted that this is not disclosed or suggested by the Yee et al. patent.

In view of the above, it is respectfully submitted that the Examiner's assertion that the Yee et al. patent discloses a cache or cache memory distorts and extends its teachings. Therefore, it is respectfully submitted that Claims 1 and 11 are not anticipated by, nor are they obvious in view of, the Yee et al. patent. Accordingly, withdrawal of the Examiner's rejection of Claims 1 and 11 is respectfully requested.

Dependent Claims 2, 4, 12-17 and 19-23 are considered patentable based upon their dependence from allowable Claims 1 and 11. Accordingly, withdrawal of the Examiner's rejection of Claims 2, 4, 12-17 and 19-23 is respectfully requested.

Claims 3, 5-8, 10, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,497 issued to Yee et al. Dependent Claims 3, 5-8, 10, and 24 are considered patentable based upon their dependence from allowable Claims 1 and 11.

In addition, with regard to Claim 10, and with respect to the cache in the gateway, the Yee et al. patent states that "Preferably, gateway control processor 32 includes a processor coupled to a memory and accompanying control hardware." Again, it is respectfully submitted that this is not a disclosure or suggestion that the gateway includes a cache or cache memory. There is no recitation contained in the Yee et al. patent regarding the use of a cache in the gateway.

With regard to Claim 24, it is respectfully submitted that the Yee et al. patent does not disclose or suggest anything regarding transmission of web pages to the subscriber units. It is respectfully submitted that the Examiner has extended and distorted the express teachings of the Yee et al. patent.

In view of the above, it is respectfully submitted that Claims 3, 5-8, 10, and 24 are not disclosed or suggested by the Yee et al. patent. Therefore, withdrawal of the Examiner's rejection of Claims 3, 5-8, 10, and 24 is respectfully requested.

Claims 25, 27 and 28 were rejected under § 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,151,497 issued to Yee et al. in view of U.S. Patent No. 5,991,596 issued to Cunningham et al. The Examiner admitted that the Yee et al. patent "fails to disclose a terrestrial communication link for communicating requests for data, and any communication between such a link and the gateway or with the user terminal." However, the Cunningham et al. patent was cited by the Examiner as disclosing "a wireless request backhaul channel that is a terrestrial communication link for communicating data requests, used in a satellite information broadcast system (col. 1 line 25 - col.2 line 48)."

It is respectfully submitted that neither the Yee et al. nor Cunningham et al. patents disclose or suggest the use of a cache in a user terminal of a two-way communication link for the purpose of caching data broadcast by way of a two-way communication link. It is also respectfully submitted that the Yee et al. system would not be altered to include the wireless request backhaul channel disclosed in the Cunningham et al. patent because the Yee et al. patent expressly teaches away from the use of a cellular-type communication channel.

It is stated in the Yee et al. patent that "Furthermore, even in cellular radiotelephone communications system, which provide communication links for moving subscriber units, the ground based switching centers, or "cells", must each be in communication and are required to conduct a lengthy subscriber authentication processing order to service a "roaming" subscriber unit that is out of range of its "home" cell but which is within the range of control of a "visited" cell. This results because only the home cell of a subscriber has full access to its authentication information (e.g., the subscriber unit identifier (ID) which uniquely identifies the subscriber unit from other subscriber units). Accordingly, the overhead involved in sending a message is quite high, impractical, and even impossible when the subscriber moves out of range of any cell in the cellular network. Furthermore, subscriber units of cellular based communication systems are not set up to handle large blocks of incoming data at high speeds. In addition, in order to send data from one node in a communication network to another, the location of the destination network node must be known. Where a subscriber travels in and out of the range of communication of several ground based communication systems, the location of the subscriber unit is always changing and hence not necessarily known. Accordingly, it is very difficult to send data, and especially large blocks of high-speed high-bandwidth data, to mobile users in a communication system." Therefore, it is respectfully submitted that the Yee et al. system would not be modified to include a wireless request backhaul channel disclosed in the Cunningham et al. patent.

In view of the above arguments, it is respectfully submitted that Claims 25, 27 and 28 are not obvious in view of the Yee et al. and Cunningham et al. patents, taken singly or together,

Accordingly, withdrawal of the Examiner's rejection of Claims 25, 27 and 28 is respectfully requested.

Claims 27 and 28 are considered patentable based upon their dependence from allowable Claim 25. Accordingly, withdrawal of the Examiner's rejection of Claims 27 and 28 is respectfully requested.

New Claim 29 has been added which recites additional aspects of the present invention. Claim 29 addresses specifics of the communication link between the gateway and user terminal, which selectively uses (1) low bandwidth data request and delivery channels or (2) a low bandwidth data request channel and a high bandwidth data delivery (broadcast or multicast) channel, or (3) terrestrial data request and delivery channels. It is respectfully submitted that this is not disclosed or suggested by the prior art cited by the Examiner. Accordingly, allowance of Claim 29 is respectfully requested.

Attached hereto is a marked-up version of the changes made to claims by the present amendment. The attached page is captioned "Version with markings to show changes made."

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure to the extent indicated by the Examiner.

In view of the above, it is respectfully submitted that all pending claims are not anticipated by, nor are they obvious in view of, the cited references, taken singly or together, or taken in view of well known prior art, without the use of hindsight reconstruction, and are therefore patentable. Therefore, it is respectfully submitted that the present application is in condition for allowance. Accordingly, reconsideration of this application and allowance thereof are earnestly solicited.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please add the following Claim.

- 29. A data transmission system comprising:
a two-way communication link comprising at least one satellite;
at least one user terminal having two-way communication with the two-way
communication link and comprising a cache for selectively caching data broadcast by way of the
5 satellite of the two-way communication link; and
at least one gateway having access to data and having two-way communication with the
two-way communication link;
which two-way communication link selectively comprises (1) low bandwidth data
request and delivery channels, or (2) a low bandwidth data request channel and a high
10 bandwidth data delivery channel, (or (3) terrestrial data request and delivery channels.--